Architectural Engineering

Undergraduate student's Programme Handbook

March 2016
Undergraduate student's
Programme Handbook
for Architectural Engineering
The British University in Egypt
March 2016

Programme Handbooks are issued and maintained by
the Faculty of Engineering, BUE. They are edited and
designed by Dr Adham Naji (The Editorial Office, Faculty
of Engineering, the British University in Egypt).
© A. Naji and Faculty of Engineering, BUE, Nov 2015.
The Architectural Engineering Programme Handbook
contents are maintained by Dr Inji Kenawy of the
Architectural Engineering Department.

Front cover: Bird’s Nest Stadium, Beijing, China. © Edwin Lee. License: CC BY-ND 2.0,
(https://creativecommons.org/licenses/by-nd/2.0/)
## Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Welcome from the department's staff</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>Why Architectural Engineering?</td>
<td>B</td>
</tr>
<tr>
<td>4</td>
<td>Module contents</td>
<td>C</td>
</tr>
<tr>
<td>13</td>
<td>Grading systems</td>
<td>D</td>
</tr>
<tr>
<td>14</td>
<td>Summer training internships</td>
<td>E</td>
</tr>
<tr>
<td>15</td>
<td>School policies</td>
<td>F</td>
</tr>
<tr>
<td>19</td>
<td>Useful bits and pieces</td>
<td>X</td>
</tr>
</tbody>
</table>

Architectural engineering touches our daily lives by transforming the space around us.
Welcome from the department's staff

Welcome to the Department of Architecture Engineering at the British University in Egypt (BUE). We, the department's staff, want to do everything we can to help you making your studies both fruitful and enjoyable. The main objective of the architecture engineering program at the BUE is to provide the basic undergraduate education required for industrial and public practice in architecture engineering, or for continued education.

The department comprises 7 lecturers, 3 associate professors, and 4 full professors. Support staffs include 13 teaching assistants and 11 assistant lecturers, 1 laboratory engineer, and an administrative assistant. The department has 2 laboratories for academic experiments related to taught modules, project work, and research. We all work together as a friendly team, with the aim of achieving excellence in teaching, research, and student experience across all cohorts.

We hope that you will use this handbook as a guide during your four years in the department. We designed it to provide you with information our students often find useful. The handbook will help in:

- Familiarising you with the structure of the department, its staff, and its programmes.
- Guiding you through the modules you need to pass in order for you to receive your degree.
- Providing you with useful information on topics such as the grading system, summer training internships, exchange programmes, academic misconduct policies, eLearning system, facilities, and other useful regulations and data.

Disclaimer. It should be noted that, as the educational process necessitates regular changes to programmes and their course contents and regulations, this handbook is meant to be a useful and relevant guide to the student for the academic year for which it is issued. The department may change this handbook to reflect such changes in future generations, and its contents are non-binding to the regulatory departments of the University.
Why Architectural Engineering?

What is taught in the Department of Architectural Engineering?

- By studying Architectural Engineering, you are taught how to design buildings through a number of studio-based modules, such as architectural design, building construction and working drawings. You will also be instructed in basic design and presentation skills, both manually and using the computer.
- You are also taught about the technical aspects of architecture through a series of modules called Building Services. Urban issues are addressed in modules dealing with urban planning and design. You are given grounding in construction sciences through a number of basic courses in civil engineering. You will also learn about history and theories of architecture.
- Construction Project Management modules will enable you to manage your projects successfully through delivering them on time, within budget and according to specification in order to achieve customer satisfaction. In addition, these modules help you running your business after graduation and work within teams effectively.

Where will you work when you graduate?

- Most architects dream of establishing their own practice and travelling around the world to build their designs. They dream of being in the shoes of star architects such as Frank Gehry, Jean Nouvel, Zaha Hadid, Steven Holl, Peter Zum- phor or Rem Koolhaas. This of course, is possible, if you are talented, confident, and persistent. Most graduates will work in design firms or construction companies. Some may specialize in architectural design and others in detailing and shop drawing. A few could work in construction sites. Even less, may work in sales and marketing of construction materials or technologies, while others may work as project managers.
- They will all work as part of teams. They will all develop inter-disciplinary skills that allow them to collaborate with other professions. They will all be required to exercise some form of creativity and versatility they were taught in university, but possibly not in the specialization they dreamed of when they were students. In conclusion enroll in the architectural Engineering programme if you are creative and hardworking, if you like buildings and design, and if you are curious about the world, and even better, want to change the world!
At the Architectural Engineering Department, basic Architectural engineering principles and design techniques are emphasized. Here in BUE, we aim to train Architectural engineers of the future, by giving them skills in chemistry, mathematics, physics, computer, economics, and engineering sciences that equip them for professional careers in process industries. In the final year, students choose to specialize either in Environmental Architectural Engineering or in PetroArchitectural Engineering.

Each module in the program has a level. Levels at the BUE reflect the standards adopted by the UK’s Higher Education Qualifications Framework (HEQF). They are as follows:

- **Level P (Preparatory)**. Taught in the preparatory year at BUE.
- **Level C (Certificate)**. Taught in degree year 1 at BUE and equivalent to a UK year 1 module.
- **Level I (Intermediate)**. Taught in degree year 2 (and degree year 3 of engineering programs) at BUE and equivalent to a UK year 2 module.
- **Level H (Honours)**. Taught in degree year 3 (and degree year 4 of engineering programs) at BUE and equivalent to a UK degree year 3 module.

The following listing provides a brief summary of the modules covered in each year of this programme, including information on module’s weight, prerequisites, semester taught in, related keywords, and a concise description of topics covered.

Note that each module has a unique code. We provide in the list below only the basic code of the module (e.g. ARCH07C), but in practice this code will be prefixed with two digits indicating the current academic year. For example, if we are in academic year 2015–2016, then the code ARCH07C will be prefixed by ‘15’, to give 15ARCH07C.

### Year 1 modules:

<table>
<thead>
<tr>
<th>Module code: ARCH01C</th>
<th>Title: Introduction to Structural Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
</tbody>
</table>

**Keywords:**

**Brief aim/scope:** This module presents the necessary information concerning the analysis of different structures types including beams, frames, trusses and others. The aim of this module is for students to understand the principles of structural analysis and design and to appreciate how this is related to architectural form.

<table>
<thead>
<tr>
<th>Module code: ARCH19C</th>
<th>Title: Surveying for Architectural Engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
</tbody>
</table>

**Keywords:**

**Brief aim/scope:** This module presents the necessary information concerning the survey activities and instrumentations. For the student to obtain an understanding of surveying instrumentation together with observation techniques and limitations, and also for the student to acquire the practical skills necessary to use maps in setting out planned structures in the field.
<table>
<thead>
<tr>
<th>Module code: ARCH07C</th>
<th>Title: Architectural Drawing &amp; Design Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope:</td>
<td>This module presents the different manual methods used in architectural design presentation. The aim of this module is to develop knowledge and understanding of, and practice using, manual methods for producing architectural drawings and practicing design representation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH08C</th>
<th>Title: Building Services (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope:</td>
<td>This module presents an introduction to the basic principles of Building Science. The aim of this module is to introduce students to the basic principles and theories used and applied to the Building services and climate control of buildings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH18C</th>
<th>Title: Construction Technology &amp; Management (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope:</td>
<td>This module presents an introduction to the technological aspects and construction sequences involved in construction industry. The aim of this module is to introduce the technological aspects, construction sequence, health and safety issues and management procedures of simple, unframed buildings to the students. The module emphasizes on the basic architectural and structural components, subsystems and their functions. The module is considered an introductory course that builds the necessary construction-based knowledge necessary for all civil and architectural courses to follow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH15C</th>
<th>Title: Visual Design (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope:</td>
<td>This module presents an introduction to the basics of graphic communication and presentation skills model making. The aim of this module is to: develop knowledge and understanding of the history of architecture and the key spatial, functional and aesthetic elements of the built form.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH06C</th>
<th>Title: Introduction to Architectural Design, History &amp; Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope:</td>
<td>The course is an introduction to main design aesthetic of history and theories of architecture were the student can analyze understand the form generation concepts, spatial qualities, building material and structure of different historical eras. The aim of this module is to develop knowledge and understanding of the history of architecture and the key spatial, functional and aesthetic elements of the built form.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH16C</th>
<th>Title: Architectural Design (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 1</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Keywords:</td>
<td></td>
</tr>
</tbody>
</table>
Brief aim/scope: This module presents knowledge on design projects. The aims of this module are to present a thorough grounding of the Egyptian building law; provide solutions to simple architecture problems taking into consideration environmental requirements and landscaping; and formulate a design brief, functional requirements and spatial requirements.

Module code: ARCH05C  Title: Engineering Design
Degree year: 1  Semester: 2  Credits: 10  Prerequisites:

Keywords: This module presents the necessary information concerning the dimensioning and detailing of different structure elements. The aim of this module is the introduction of basic structural elements and systems employed in the construction of different structural steel and reinforced concrete buildings.

Module code: ARCH09C  Title: Building Construction (1)
Degree year: 1  Semester: 2  Credits: 10  Prerequisites:

Keywords: This module presents an introduction to the basics of technical drawings. The aim of this module is to present the building production process for unframed buildings and to introduce the student to professional development and lifelong learning.

Module code: ARCH02C  Title: Construction Materials
Degree year: 1  Semester: 2  Credits: 10  Prerequisites:

Keywords: This module presents the necessary information concerning the construction materials properties and behaviour. The aim of this module is to provide students with an understanding of the nature of common construction materials, their constituents, and properties and how they are used in engineering applications and to show how this knowledge is applied to design.

Module code: ARCH17C  Title: Technical Writing for Architects
Degree year: 1  Semester: 2  Credits: 5  Prerequisites:

Keywords: This module presents an introduction to technical report writing and terminologies used by architects. The aims of this module are to provide the student with skills in assimilation of information pertinent to the architectural profession available from technical documents such as specifications regulations and reports and from academic research such as journal papers and academic publications. In addition, this module supports students to communicate their findings in writing and graphically.

Year 2 modules:

Module code: ARCH03I  Title: Theory of Architecture (1)
Degree year: 2  Semester: 1  Credits: 10  Prerequisites:

Keywords: Design methods, design concept, design thinking
Brief aim/scope: The aims of this module are to present architectural design methods; provide in-depth knowledge of architectural design elements and their inter-relations.

Module code: ARCH13C  Title: Visual Design (2)
Degree year: 2  Semester: 1  Credits: 10  Prerequisites:
### Module contents

<table>
<thead>
<tr>
<th>Module code</th>
<th>Title</th>
<th>Degree year</th>
<th>Semester</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Keywords</th>
<th>Brief aim/scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH01C</td>
<td>Land, Building Law &amp; Urban</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td></td>
<td>Building law, elements of the city and urban development strategies.</td>
<td>The aims of this module are to provide the student with the knowledge and skills necessary for shade and shadows casting, and perspectives drawing, as necessary tools of architectural representation and graphic communication.</td>
</tr>
<tr>
<td>ARCH11C</td>
<td>Building Construction &amp; Management (2)</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td></td>
<td>construction, in situ framed structures, finishes</td>
<td>The aims of this module are to introduce the principles and techniques of building construction, building materials and building systems; Introduce construction methods.</td>
</tr>
<tr>
<td>ARCH02I</td>
<td>Architectural Design (2) &amp; Sustainability</td>
<td>2</td>
<td>1</td>
<td>20</td>
<td></td>
<td>design, architecture, function, environment.</td>
<td>The aims of this module are to understand the relationship between the building architectural form; appreciate the importance of low energy building design in contributing to a sustainable future; present the environmental issues which should be considered during the design and construction of buildings; and to apply these issues on an architectural design problem; Resolution of structural issues, functional requirements, and form generation in low-rise buildings.</td>
</tr>
<tr>
<td>ARCH14C</td>
<td>2D CAD for Architectural Design</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td></td>
<td>CAD, AutoCAD, 2D Architectural drawings.</td>
<td>The aims of this module are to develop students' skills of using 2D computer aided design to produce quality 2D architectural drawings using AutoCAD software.</td>
</tr>
<tr>
<td>ARCH12C</td>
<td>Principles of Management</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td></td>
<td>management, organization.</td>
<td>The aim of this module is to introduce the fundamental principles of management with particular emphasis on the construction industry.</td>
</tr>
<tr>
<td>ARCH05I</td>
<td>Building Construction &amp; Management (3)</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td></td>
<td>construction, technology, framed structures.</td>
<td>The aim of this module is to introduce the technological aspects of the design and construction of steel and precast framed buildings.</td>
</tr>
<tr>
<td>ARCH06I</td>
<td>Building Services (2)</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td></td>
<td>Service, Building, Technology.</td>
<td>The aim of this module is to present technological aspects, function and operation of</td>
</tr>
</tbody>
</table>
 MODULE CONTENTS

**Module code:** ARCH07I  **Title:** Islamic Architecture History

- **Degree year:** 2  
- **Semester:** 2  
- **Credits:** 10  
- **Prerequisites:**  
- **Keywords:** Islamic civilization, architecture, culture, history  
- **Brief aim/scope:** The aim of this module is to introduce the architecture of the Islamic Civilization as it developed throughout the ages and in the different regions and to ground the students in the architectural concepts used in the design of particular building types.

---

**Module code:** ARCH08I  **Title:** Architectural Design(3)

- **Degree year:** 2  
- **Semester:** 2  
- **Credits:** 15  
- **Prerequisites:**  
- **Keywords:** Design, architecture, function.  
- **Brief aim/scope:** The aim of this module is to develop architectural design capabilities related to spatial configuration of several repetitive elements, while maintaining functional and structural requirements.

---

**Module code:** ARCH01I  **Title:** Contract Administration & Quantity Surveying and Estimation

- **Degree year:** 2  
- **Semester:** 2  
- **Credits:** 5  
- **Prerequisites:**  
- **Keywords:** Construction estimating, tendering, procurement.  
- **Brief aim/scope:** This module aims to provide in-depth knowledge of current and emerging practices of the Quantity Surveyor; Introduce the manner in which construction contractors prepare estimates and tenders.

---

**Year 3 modules:**

**Module code:** ARCH09I  **Title:** 3D CAD Modelling

- **Degree year:** 3  
- **Semester:** 1  
- **Credits:** 5  
- **Prerequisites:**  
- **Keywords:** Computer modelling, 3Dmax.  
- **Brief aim/scope:** The aims of this module are to develop students’ understanding of 3D computer aided design procedures and command structures using AutoCAD & 3D MAX, for architectural, engineering and construction professions (AEC); and provide students with the ability to evaluate and apply 3D CAD modelling, editing and rendering techniques in architectural, engineering and construction projects.

---

**Module code:** ARCH10I  **Title:** Theory of Architecture (2)

- **Degree year:** 3  
- **Semester:** 1  
- **Credits:** 10  
- **Prerequisites:**  
- **Keywords:** Architecture, theory, philosophy.  
- **Brief aim/scope:** The aims of this module are to introduce students to the theories and philosophies of 20th and 21st century architecture; present different space concepts in relation to the dialects between structure and materials; identify and describe different architectural styles from all regions of the world from modernism to the theory displacement and blob architecture as well as to identify different case studies within and beyond the parameters of Modernism.

---

**Module code:** ARCH11I  **Title:** Architectural Design (4)

- **Degree year:** 3  
- **Semester:** 1  
- **Credits:** 15  
- **Prerequisites:**  
- **Keywords:** Design, project, conceptual design.  
- **Brief aim/scope:** The aims of this module are to gain an understanding of the methods for challenging construction designs and processes by innovative solutions; and apply these
solutions into an architectural design problem for complex large span buildings with functional spatial requirements.

<table>
<thead>
<tr>
<th>Module code: ARCH12I</th>
<th>Title: Geotechnical Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: Soil, rock, investigation, failure.</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to illustrate the influence of ground conditions on the design and construction processes, and to have an understanding of engineering solutions that can be applied to typical geotechnical problems.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH14I</th>
<th>Title: Working Drawings (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: detail, workshop, drawing</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to introduce students to advanced detailed execution drawings, and workshop detailing.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH16I</th>
<th>Title: Project Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 1</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: project management, investment</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to provide students with an understanding of project management tools and techniques.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH01H</th>
<th>Title: Building Services (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: details, execution, workshop, symbols, drawings.</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aims of this module are to introduce detailed execution drawings, and workshop detailing of building service systems; and present signs and symbols and different systems used in coordination and sheet linking.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH02H</th>
<th>Title: Construction Economics &amp; Project Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: economics, construction, value engineering.</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to introduce students to the concept of construction economics and the effect of design and cost monitoring as a pre-contract service providing &quot;value for money&quot; in buildings.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH03H</th>
<th>Title: Architectural Design (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: design, project, conceptual design.</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to present students with the process within which high-rise buildings are conceived and designed, from briefing to concept design stage and to apply this knowledge in a conceptual building design project.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH13I</th>
<th>Title: Interior Design &amp; Refurbishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
<tr>
<td>Keywords: Interior Design, refurbishment, defects.</td>
<td></td>
</tr>
<tr>
<td>Brief aim/scope: The aim of this module is to prepare students to be able to present the theories and concepts of Interior Design of architectural spaces; and present strategies and techniques used in converting and refurbishing buildings.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module code: ARCH13H</th>
<th>Title: Working Drawings (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree year: 3</td>
<td>Semester: 2</td>
</tr>
<tr>
<td>Credits: 10</td>
<td>Prerequisites:</td>
</tr>
</tbody>
</table>
### Module contents

**Keywords:** working, construction, drawings, details.

**Brief aim/scope:** The aim of this module is to prepare students to be able to complete a set of workshop drawings required to build a preliminary construction project. The course begins with an overview of the design process and continues with a study of manufacturing materials and processes, standards, detail and assembly drawings, high technology working details.

**Module code:** ARCH17I  **Title:** Urban Planning  
**Degree year:** 3  **Semester:** 2  **Credits:** 10  **Prerequisites:**

**Keywords:** urban, community, planning.

**Brief aim/scope:** The aim of this module is to introduce students to the principles, processes, and practices of urban planning.

---

### Year 4 modules (6 mandatory and 3 optional):

**Module code:** ARCH06H  **Title:** Research Dissertation  
**Degree year:** 4  **Semester:** 1,2  **Credits:** 20  **Prerequisites:**

**Keywords:** Research, Architecture, Design Project

**Brief aim/scope:** The aims of this module is to provide students with experience in research process and methodology to be able to investigate topics related to architecture and the built environment using methodologies of scientific enquiry.

**Module code:** ARCH05H  **Title:** Urban Design  
**Degree year:** 4  **Semester:** 1  **Credits:** 10  **Prerequisites:**

**Keywords:** urban design, urban fabric, community,

**Brief aim/scope:** The aim of this module is for students to understand the process within which urban context are conceived and designed, from appraisal of existing urban character to scheme design stage and to apply this knowledge in an urban design project.

**Module code:** ARCH07H  **Title:** Architectural Design (6)  
**Degree year:** 4  **Semester:** 1  **Credits:** 10  **Prerequisites:**

**Keywords:** management, design, construction

**Brief aim/scope:** The aim of this module is to present the principles of design of high-tech buildings within a context with cultural significance.

**Module code:** ARCH04H  **Title:** Advanced Construction Technology  
**Degree year:** 4  **Semester:** 1  **Credits:** 10  **Prerequisites:**

**Keywords:** advanced technology, management, contemporary architecture

**Brief aim/scope:** The aim of this module is to enable students to develop an understanding of the management and technological aspects of large scale complex contemporary construction projects.

**Module code:** ARCH25H  **Title:** BSc. Design Project  
**Degree year:** 4  **Semester:** 1,2  **Credits:** 10  **Prerequisites:**

**Keywords:** Design, Graduation Project

**Brief aim/scope:** The aim of this module is to present the students with the experience of the design process from preparation of the brief through to detailed design drawings.
<table>
<thead>
<tr>
<th>Module code</th>
<th>Title</th>
<th>Degree year</th>
<th>Semester</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH10H</td>
<td>Sustainability and the Built Environment</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH14H</td>
<td>Landscape Architecture (1)</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH15H</td>
<td>Interior Design (2)</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH20H</td>
<td>Geographic Information Systems</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH09H</td>
<td>Human Resource Management in Construction &amp; Architecture</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH17H</td>
<td>Architecture of Arid Environments</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>ARCH08H</td>
<td>Management Information Systems</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**Brief aim/scope**:

- The aim of this module is to present students with the principles and practice of sustainability issues as they relate to the built environment and its many stakeholders.
- The aims of this module are to understand the context and the process within which landscape environments are conceived and designed, from concept to scheme design stage and apply this knowledge in a conceptual landscape design project.
- The aim of this module is to develop knowledge and understanding of the key spatial, functional and aesthetic elements of interior design of architectural spaces.
- The aims of the module are to provide a broad introduction to the basic concepts of Geographical Information Systems (GIS) including technical, data-related, and organizational issues, and to develop a critical appreciation of the impact of GIS on the planning profession and society at large.
- The aim of this module is to present students with the range of techniques and strategies for managing people within the context of the construction project environment.
- The aims of this module are to provide a broad introduction to the concepts of architectural design in hot arid environments and the way a building form and structure moderates the climate for human comfort; Introduce both passive and mechanical methods (and the combination of both) to achieve human comfort in arid environments; however the emphasis on understanding both established and innovative approaches to passive design methods in hot arid environments.
- The aim of this module is to introduce students to Management Information Systems (MIS), and Building Information Modelling (BIM). Emphasis is on their development and applications within design and construction practices.
Module code: ARCH12H  Title: e-Construction & Virtual Environments
Degree year: 4  Semester: 2  Credits: 10  Prerequisites:
Keywords: electronic, construction, virtual environments.
Brief aim/scope: The aims of this module are to present the definition of construction as a process-based industry; and acquire the current knowledge of electronic interface management, supply chain management and the role of virtual environments data interchange in the process.

Module code: ARCH16H  Title: Environmental Impact Assessment
Degree year: 4  Semester: 2  Credits: 10  Prerequisites:
Keywords: Environmental impact, assessment tools, EIA report.
Brief aim/scope: The aim of this module is to develop knowledge and understanding of the key concepts, theories, methodologies, and techniques of conducting Environmental Impact Assessment (EIA) of a specific project.

Module code: ARCH11H  Title: Lean Construction
Degree year: 4  Semester: 2  Credits: 10  Prerequisites:
Keywords: Lean Theory; Lean Principles, Lean Construction, Lean Process Management, Waste, Value.
Brief aim/scope: The aim of this module is to introduce students to the principles, tools and techniques of Lean Construction in the construction industry.

Module code: ARCH18H  Title: Landscape Architecture (2)
Degree year: 4  Semester: 2  Credits: 10  Prerequisites:
Keywords: Landscape, plantation, hardscape.
Brief aim/scope: The aim of this module is for students to understand the process of landscape engineering and construction, from the final design stage to the implementation stage, and to apply this knowledge in preparing construction documents of a landscape design project.
At the BUE, we use both the Egyptian and the British grading systems. The following equivalence mapping table provides a useful tool to convert between the two systems.
Summer training internships

Each student in this programme undergoes two architectural practice placements in the summer of year two and year three, which are a pass or fail requirement for graduation. Architectural placement internships are required of all students. This supports the development and recognition of career management skills through work placements or work experience, either through training at architectural firms or with other architectural workshops offered by the department.
School policies

Student attendance policy

• Principles:
  1. BUE has obligations to students and their sponsors (usually parents or other family members) to provide a quality educational experience in a supportive learning environment.
  2. Students have obligations to themselves, their families and the BUE, to ensure that they make best use of the learning opportunities provided by the University so that they may achieve a degree of high academic standing.
  3. It is widely acknowledged across Higher Education, supported by experience and research evidence, that students who do not attend or participate in classes are more likely to achieve poor grades or fail. This is mainly because students who do not attend will not acquire the added value from their interactions with teaching staff and their peers in discussing and understanding a particular topic. Their absence is also a sign that they are distracted by other issues which can impede their learning.
  4. The University monitors student attendance in accordance with the procedures below, to ensure that it fulfils its obligations and provides appropriate support to students.

• Requirements and procedures:
  1. All students are expected to attend and participate in all teaching and learning sessions in order to benefit fully from their BUE education.
  2. Students should contact the relevant Teaching Assistant and then Module Leader if they have any concerns about understanding the requirements and/or content of a particular module.
  3. Students should contact either their Personal Advisor (for Preparatory Year students) or their Head of Department (all other students) if they wish to seek advice in regard to their studies.
  4. Module outlines on e-learning shall specify the core teaching sessions for modules for which student attendance shall be recorded and indicate that non-attendance shall be reported in accordance with paragraph.
  5. Core teaching sessions shall be determined by Module Leaders in consultation with Heads of Department. For most modules, the core sessions will be tutorials and/or laboratory/practical classes. Lectures will be specified as core sessions for some modules, including all English modules. In the case of Final Year students, Module Leaders shall determine.
  6. Once a student has missed three core teaching sessions specified for a particular module, Module Leaders shall arrange for a Student Absence flag to be inserted in a student’s record on the Student Records System (SRS). This shall lead to the automatic generation of letters to students, copied to their parents (and to the Personal Advisors of Preparatory Year students), informing students that they are deemed “At Risk” of failing the modules concerned due to their poor attendance.
  7. If students “At Risk” continue not to attend and miss a further three core
teaching sessions as specified for a particular module (two core sessions in the case of English modules), Module Leaders shall arrange for a second flag to be inserted on the SRS. This shall lead to the automatic generation of second letters to students, copied to their parents (and to the Personal Advisors of Preparatory Year students), informing students that they are deemed “At Significant Risk” of failing the modules concerned due to their continued poor attendance. Where these letters relate to English modules, they shall indicate that students will be ineligible for further assessment in the Semester concerned, as specified in paragraph 10 below.

8. Letters to students and parents shall highlight the possible consequences, as specified in paragraph 10 below.

9. Students who have a genuine reason for their absence should use the Student Absence Procedures (as specified in the Student Handbook) in order to avoid the possibility of receiving “At Risk” letters.

• **Penalties for non-attendance:**

1. Students who do not fulfill the attendance requirements for a module shall receive letters which highlight the obligations of students in regard to their studies and confirm the following:
   - That, if students fail modules, they have only a limited number of attempts to pass modules, as specified in the General Academic Regulations (GAR), if they are to meet the GAR requirements for award of a UK Degree;
   - That students may be prevented from re-sitting modules during the Summer Assessment Period, depending on the number of credits failed, as specified in the GAR;
   - That students who wish to remain on the UK degree will be required to repeat their studies in the following academic year rather than progress, if they do not pass all their modules in a given programme year, provided that they have not exhausted their limited number of attempts in a given module;
   - That students who have exhausted their limited number of attempts in a given module will be dismissed from the UK degree, in accordance with the GAR; attendance requirements that are consistent with the level and nature of study and with the requirements of projects and dissertations.
   - That students will be dismissed from the BUE if they do not satisfy the regulations for the EG-only Degree.
   - That students who do not satisfy English module attendance requirements will be prevented from taking the unseen examination/final paper for the English modules concerned, subject to approval of the Faculty Council, and that they may be ineligible to re-sit English modules during the Summer Assessment Period, as specified in the GAR;
   - That student interim transcript will indicate “At Risk” flags for the module(s) concerned.

---

**Academic Misconduct**

1. It is academic misconduct for any student in the course of any assessment to engage in one or more of the following activities:
   (i) Failing to comply with the Rules for the Conduct of Students in Assessments.
(ii) Failing to comply with the Rules for the Conduct of Students in Examination Halls.
(iii) Assisting another student to gain an advantage by unfair means, or receiving such assistance, for example by collusion, by impersonation or the passing off of one individual’s work as another’s. This includes undeclared failure to contribute to group coursework assignments.
(iv) Misleading the examiners by the fabrication or falsification of data.
(v) Plagiarism, which is defined by the University as ‘submitting work as the student’s own of which the student is not the author’. This includes failure to acknowledge clearly and explicitly the ideas, words or work of another person whether these are published or unpublished.
(vi) Engaging in other activity likely to give an unfair advantage to any student.

2. A student shall certify, when submitting work for assessment, that the work is his/her own. Students are referred to the Coursework Submission and Statement of (SP) An offence of academic misconduct will be defined as minor or major depending on its seriousness. Minor Offences shall be considered by the Head of Department of the Faculty of the student (the relevant Head of Department). Major Offences shall be considered by the Faculty Academic Misconduct Committee.

3. Any decision made in accordance with the regulations on academic misconduct shall not be overturned subsequently by a Programme Examination Board under any circumstances.

4. An incident shall be deemed to be a Minor Offence of academic misconduct if it relates to work for assessment not undertaken in an Examination Hall, and if the nature of the incident together with the circumstances of the student make appropriate a relatively limited penalty.

5. Except for the Preparatory Year, a student suspected of committing a Minor Offence will automatically be referred for action under the Major Offence procedure if s/he has previously been found guilty of any offence of academic misconduct. In the case of a Preparatory Year student, referral for action under the Major Offence procedure will be applied only exceptionally at the discretion of the relevant Dean.

6. The relevant Head of Department is empowered to consider charges of Minor Offences against students and to levy penalties.

7. An incident shall normally be deemed to be a Major Offence of academic misconduct if it relates to an assessment undertaken in an Examination Hall, or to other assessed work where the nature of the incident together with the circumstances of the student make appropriate a substantial penalty. Except for the Preparatory Year, if a student has been found guilty of a previous offence of academic misconduct, the case shall be designated a Major Offence. In the case of a Preparatory Year student referral for action under the Major Offences procedure will be applied only exceptionally at the discretion of the relevant Dean. Final interpretation of the offence of academic misconduct as a Major Offence shall be the responsibility of the Dean in consultation with the Registrar.

8. Major Offences shall be considered by the Faculty Academic Misconduct
Committee of the student’s home Faculty. The Committee shall be appointed by the Dean on an annual basis with the following constitution:

- Three academic faculty members, including Dean, shall act as Chair.
- One member of the BUE Students’ Union (SU) Board nominated by SU
- Where requested, one member of any validating institute, except at P level.
- The Registrar has the right to attend the Committee.
- No individual has a conflict of interest with case to be heard may serve on Faculty Academic Misconduct Committee or act as its Secretary.

9. Offences committed in the Preparatory Year are cumulative (i.e. an offence in Semester One will affect the consideration of a further offence during the year – see 14.6) but do not carry into Degree Year 1. In Degree Year 1 and all other years offences are cumulative.

10. A case which appears to academic staff to suggest that a student has committed an act of academic misconduct shall be reported immediately to the Dean, through the Head of Department with a recommendation of whether it constitutes a minor or major offence. The Dean shall consider whether or not there is a prima facie case to answer. Where the Dean considers the incident to constitute a Major Offence, s/he shall consult the Registrar. If it is considered the case is a Major Offence, the Dean shall refer the matter to the Faculty Academic Misconduct Committee. If it is considered the case is a Minor Offence, the Dean shall refer the matter to the relevant Head of Department.

11. The relevant Head of Department shall decide whether any action shall be taken under the procedures for Minor Offences.

12. Where the Registrar has been consulted, s/he shall advise the relevant Dean either to refer the case for action under the Major Offences procedure.

13. Students shall be notified in writing of alleged Minor Offences by the relevant Head of Department/Dean. Students shall be invited to admit or deny the allegation, Head of Department/Dean. Students shall be invited to admit or deny the allegation, have the right to see the evidence against them and to defend themselves in writing and/or in person, and may be accompanied by an individual of their own choosing. Any written defence or request to be heard in person, including the name and status of any accompanying individual, must be received by the relevant Head of Department within five working days of the notification of the alleged misconduct.

14. Having taken into account the evidence and the defense, if any, the relevant Head of Department shall decide whether the student is guilty of the offence, and if so, the appropriate penalty under paragraph 10.31 GAR. The student (and Q&V) shall be notified in writing of the relevant Head of Department’s decision and of the penalty, if one is to be applied, within ten working days of the student being notified of the allegation.
Academic staff

Full-time academic members, ordered alphabetically by surname:

Prof Husam Bakr
Husam.bakr@bue.edu.eg
Phone ext. 1421

Dr Marwa Dabaieh
Marwa.dabaieh@bue.edu.eg
Phone ext. 1441

Prof. Khaled Dewidar
Vice Dean for Teaching & Learning
khaled.dewidar@bue.edu.eg
Phone ext. 1435

Prof. Mohamed ElAttar
Exam Officer
Mohamed.elattar@bue.edu.eg
Phone ext. 1429

Dr Marwa Adel Elsayed
Phone ext. 1441

Dr. Inji Kenawy
Inji.kenawy@bue.edu.eg
Phone ext. 1500

Dr. Laila Khodeir
Laila.khodeir@bue.edu.eg
Phone ext. 1490

Dr. Amany Micheal
Amany.micheal@bue.edu.eg
Phone ext. 1459

Dr. Amny Micheal
Amany.micheal@bue.edu.eg
Phone ext. 1459

Dr. Gehan Nagy
Gehan.nagy@bue.edu.eg
Phone ext. 1494

Dr. Ashraf Nessim
Programme Director
Ashraf.nessim@bue.edu.eg
Phone ext. 1489
Teaching assistants, demonstrators, and lab engineers, ordered alphabetically by surname:

- Mostafa Adel
- Youmna Ahmady
- Hala Ali
- Youmna Amr
- Esraa Alaa Eldin
- Amany Atef
Useful Bits and Pieces

Architectural Engineering Programme Handbook, March 2016

Yara Emad
Toka Fahmy
Sara Magdy
Dalya Maguid
Deena Mohamed
Nouran Osama
Yara Salah
Samar Shokry
Hala Medhat
Resources and facilities

Laboratories:
- CAD LAB (Building A)
- GIS LAB (Building H)

Library resources and databases:
- Scopus
- Science Direct

Field trips:
- Old Cairo Trips
- Landscape Architecture site visits
- Building Construction site visits

Other activities:
- Participation in international summer schools in Lincoln, UK.
- Participation in international competition, Bergen international wood festival, Norway
- Participation in international summer schools in Cardiff, UK.
- Participation in winter schools in Enna-Kore, Italy.
- Participation in winter schools in Stuttgart, Germany.

Workshops:
- Model Making Workshop

Useful student references:
- General Academic Regulations (GAR):
  http://www.bue.edu.eg/pdfs/q&v/GAR.pdf
- Student Handbook:
  http://www.bue.edu.eg/pdfs/q&v/SHB%2015-16%20-Sept%2015.pdf
- BUE library study, style and copyright guides:
  http://lib.bue.edu.eg/index.php/information-skills-introduction/

Back cover: The City of Arts and Sciences, Valencia, Spain. © Andrew E. Larsen. License: CC BY-ND 2.0 (https://creativecommons.org/licenses/by-nd/2.0/)
My notes:
My notes: